

FIG. 1

gaattccgctc	atggcgctcgc	atggcgctcgc	atggcgctcgc	vagccaaatt	cgtctgcgaa
gaagaaagag	gagaagggga	agaacatcca	ggtaggtggtg	agatgcagac	catttaattt
ggcagagcgg	aaagctagcg	cccatttcaat	agtagaatgt	gatcctgtac	gaaaagaagt
tagtgtagca	actggaggat	tggctgacaa	gagctcaagg	aaaacataca	cttttgatat
ggtgtttgga	gcattctacta	aacagattga	tgtttaccga	agtgttgttt	gtccaattct
ggatgaagtt	attatgggct	ataattgcac	tatctttgcg	tatggccaaa	ctggcactgg
aaaaactttt	acaatggaag	gtgaaaggct	acctaataga	gagtatacct	gggaagagga
tcccttggtc	ggtataattc	cacgtaccct	tcatcaaatt	tttgagaaac	ttactgataa
tggtagtgaa	ttttcagtc	aagtgtctct	gttggagatc	tataatgaag	agctttttga
tcttcttaat	ccatcatctg	atgtttctga	gagactacag	atgtttgatg	atccccgtaa
caagagagga	gtgataatta	aaggtttaga	agaaattaca	gtacaagaac	aggatgaagt
ctatcaaat	ttagaaaagg	gggcagcaaa	aaggacaact	gcagctactc	tgatgaatgc
atactctagt	cggtccctact	cagttttctc	tgttacaata	catatgaaag	aaactacgat
tgatggagaa	gagcttggtt	aaatcgga	gttgaacttg	gttgatcttg	caggaaagtga
aaacattggc	cggtcttgga	ctgttgataa	gagagctcgg	gaagctggaa	atataaatca
atccctgttg	actttgggaa	gggtcattac	tgccttgtta	gaaagaacac	ctcatgttcc
ttatcgagaa	tctaaactaa	ctagaatcct	ccaggattct	cttggagggc	gtacaagaac
atctataatt	gcaacaattt	ctcctgcac	tctcaatctt	gaggaaactc	tgagtacatt
ggaatatgct	catagagcaa	agaacatatt	gaataagcct	gaagtgaatc	agaaactcac
caaaaaagct	cttattaagg	agtatacgg	ggagatagaa	cgtttaaaac	gagatcttgc
tgcagcccg	gagaaaaatg	gagtgtatat	ttctgaagaa	aatttttagag	tcagtagtgg
aaaaattagct	gttcaagaag	agcagattgt	agaattgatt	gaaaaaatg	gtgctgttga
ggaggagctg	aatagggtta	cagagttgtt	tatggataat	aaaaatgaac	ttagccagtg
taaatctgac	ctgcaaaaata	aaacacaaga	acttgaacc	actcaaaaac	atttgcaaga
aactaaatta	caacttggtt	aagaagaata	tatcacatca	gctttggaaa	gtactgagga
gaaacttcat	gatgctgcc	gcaagatgat	taacacagtt	gaagaaacta	caaaagatgt
atctgggtctc	cattccaac	tggatcgtaa	gaaggcagtt	gaccaacaca	atgcagaagc
tcaggatatt	tttggcaaaa	acctgaatag	tctgtttaat	aatatgggaag	aattaattaa
ggatggcagc	tcaaagcaaa	aggccatgct	agaagtacat	aagaccttat	ttggtaatgt
gctgtcttcc	agtgtctctg	cattagatac	cattactaca	gtagcacttg	gatctctcac
atctattcca	gaaaatgtgt	ctactcatgt	ttctcagatt	tttaatatga	tactaaaaga
acaatcatta	gcagcagaaa	gtaaaactgt	actacaggaa	ttgattaatg	tactcaagac
tgatcttcta	agttcactgg	aaatgatttt	atccccaact	gtgggtgtcta	tactgaaaat
caatagtcaa	ctaaagcata	ttttcaagac	ttcattgaca	gtggccgata	agatagaaga
tcaaaaaaaa	aggaaactcag	atggctttct	cagtatactg	tgtaacaatc	tacatgaact
acaagaaaat	accattttgtt	ccttgggttga	gtcacaaaaag	caatgtggaa	acctaactga
agacctgaag	acaataaagc	agaccattc	ccaggaaactt	tgcaagttaa	tgaatctttg
gacagagaga	ttctgtgctt	tggaggaaaa	gtgtgaaaaat	atacagaaac	cacttagtag
tgtccaggaa	aataacagc	agaaatctaa	ggatatagtc	aacaaaaatga	cttttcacag
tcaaaaaattt	tgtgtgtatt	ctgatggctt	ctcacaggaa	ctcagaaatt	ttaaccaaga
aggtacaaaa	ttggttgaag	aatctgtgaa	acactctgat	aaactcaatg	gcaacctggga
aaaaatatct	caagagactg	aacagagatg	tgaatctctg	aacacaagaa	cagtttattt
ttctgaacag	tgggtatctt	ccttaaatga	aagggaacag	gaacttcaca	acttattgga
ggttgttaagc	caatgttgtg	aggcttcaag	ttcagacatc	actgagaaat	gagatggacg
taaggcagct	catgagaaac	agcataacat	ttttcttgat	cagatgacta	ttgatgaaga
taaattgata	gcacaaaatc	tagaacttaa	tgaaaccata	aaaattgggt	tgactaaagct
taattgcttt	ctgggaacag	atctgaaact	ggatatccca	acaggtagca	caccacagag
gaaaagttaa	ttatacccat	caacactgg	aagaactgaa	ccacgtgaac	atctccttga
tcagctgaaa	aggaaacagc	ctgagctgtt	aatgatgcta	aactgttcag	aaaacaacaa
agaagagaca	attccggatg	tggatgtaga	agaggcagtt	ctggggcag	atactgaaga
acctctaagt	caagagccat	ctgtagatgc	tgggtgtggat	tggtcatcaa	ttggcggggg
tccatttttct	cagcataaaa	aatcacatgg	aaaagacaaa	gaaaacagag	gcattaacac
actggagagg	tctaaagtgg	actaaagtgg	agagcacttg	gttacaaaaga	gcagattacc
tctgcgagcc	cagatcaacc	tttaattcac	ttgggggttg	gcaattttat	ttttaaagaa
aaacttaaaa	ataaaacctg	aaaccccaga	acttgagcct	tgtgtataga	ttttaaaaga
atataatat	cagccggggc	cgtggctcta	gctgtaatcc	cagctaactt	tggaggctga
ggcgggttga	ttgcttgagc	ccaggagttt	gagaccagcc	tggccaacgt	gcgctaaaac
cttctgtctct	gttaaaaaatt	agccggggcgt	ggtgggcaca	ctcctgtaat	cccagctact
gggggagctg	aggcacgaga	atcacttgaa	cccagaagcg	gggttgagct	gagccaaagg
tacaccacta	cactccagcc	tgggcaacag	agcaagactc	ggtctcaaaa	ataaaattta
aaaaagatat	aaggcagtac	tgtaaatcca	gttgaatttt	gatattctacc	catttttctg
tcatccctat	agttcacttt	gtattaaatt	gggttcattt	tgggatttgc	aatgtaataa
	cgtattttcta	gttttcatat	aaagtagttc	tttttaggaat	tc

FIG. 2

MASQPNSSAKKKEEGKNIQVVVRCRPFNLAERKASAHSIVECD
PVRKEVSVRTGGLADKSSRKTYTFDMVFGASTKQIDVYRSVVCPIILDEVIMGYNCTIF
AYGQTGTGKTFTMEGERSPNEEYTWEEDPLAGIIPRTLHQIFEKLTNGTEFSVKVSL
LEIYNEELFDLLNPSSDVSERLQMFDDPRNKRGVIIKGLEEITVHNKDEVYQILEKGA
AKRTTAATLMNAYSSRSHSVFSVTIHMKETTIDGEELVKIGKLNLDLAGSENIGRSG
AVDKRAREAGNINQSLTLGRVITALVERTPHVPYRESKLTRILQDSLGGRTTSIIA
TISPASLNLEETLSTLEYAHRAKNILNKPEVNQKLTKKALIKKEYTEEIERLKRDLAAA
REKNGVYISEENFRVMGKLTVQEEQIVELIEKIGAVEEELNRVTALFMDNKNELDQC
KSDLQNKQTQLETTQKHLQETKLQLVKEEYITSALESTEEKLHDAASKLLNTVEETTK
DVSGLSKLDRAKKAQDQHNAAEQDDIFGKNLSLFNNMEELIKDGSQKAMLEVHKT
FGNLLSSVSALDTITTVALGSLTSIPENVSTHVSQIFNMILKEQSLAAESKTVLQEL
INVLTDLSSLEMLSPTVVSILKINSQKHFKTSLTVADKIEDQKKRNSDGFLSI
LCNNLEHELQENTICSILVESQKQCGNLTEDLKTIKQTHSQELCKLMNWTERFCALEEK
CENIQKPLSSVQENIQKSKDIVNKMTFHSQKFCADSDGFSQELRNFNQEGTKLVEES
VKHSDKLNNGNLEKISQITEQRCESLNTRTVYFSEQWSSLNREQEELHNLLEVVSQCC
EASSSDITEKSDGRKAAHEKQHNIFLDQMTIDEDKLIQNLNELNETIKIGLTKLNCFL
EQDLKLDIPTGTTPQRKSYLYPSTLVRTEPREHLLDQLKRKQPELLMMLNCSENNKEE
TIPDQVVEEAVLGQYTEEPLSQEPSVDAGVDCSSIGGVPPFQHKKSHGKDKENRGINT
LERSKVEETTEHLVTKSRLPLRAQINL

FIG. 3

atggcggtgagccagccaaattcgtctgcgaagaagaaagaggagaaggggaagaacatccaggtgggtgggtgaga
tgcagaccatttaattttggcagagcggaaagctagcgccattcaatagtagaatgtgatcctgtacgaaaa
gaagttagtgtacgaactggaggattggctgacaagagctcaaggaaaacatacacttttgatatgggtgttt
ggagcatctactaaacagattgatgtttaccgaggtgtgtttgtccaattctggatgaagttattatgggc
tataattgcactatctttgcgtatggccaaactggcactggaaaaacttttacaatggaaggtgaaaggtca
cctaataagaggtatacctgggaagaggatcccttggctgggtataattccacgtacccttcatcaaattttt
gagaaacttactgataatggtactgaattttcagtcaaagtgtctctgttggagatctataatgaagagctt
tttgatcttcttaatccatcatctgatgtttctgagagactacagatgtttgatgatccccgtaacaagaga
ggagtgataaattaaaggtttagaagaaattacagtacacaacaaggatgaagtgatcaaatttttagaaaag
ggggcagcaaaaaggacaactgcagctactctgatgaatgcatactctagtcgttcccactcagttttctct
gttacaatacatatgaaagaaactacgattgatggagaagagcttggttaaaatcggaaagttgaacttggtt
gatcttgaggaagtgaaaacattggccgttctggagctgttgataagagagctcgggaagctggaaatata
aatcaatccctgttgactttgggaaggggtcattactgcccttgtagaagaacacctcatgttccttatcga
gaatctaaactaactagaatcctccaggattctcttggagggcggtacaagaacatctataattgcaacaatt
tctcctgcatctctcaatcttgaggaaactctgagtacattggaatatgctcatagagcaaaagaacatattg
ctcgaggggtaccgagcagaagctgatcagcgaggaggacctgatcgagcaccaccaccaccactga

FIG. 4

MACQPNSSAKKKEEGKNIQVVVRCRPFNLAERKASAHSIVECDPVRKEVSVRTGGLADKSSRKTYTFDMVF
GASTKQIDVYRSVVCPIDEVIMGYNCTIFAYGQTGTGKTFTMEGERSPNEEYTWEEDPLAGIIPRTLHQIF
EKLT DNGTEFSVKVSLLEIYNEELFDLLNPSSDVSERLQMFDDPRNKRGV I I KGLEEITVHNKDEVYGILEK
GAAKR TTAATLMNAYSSRSHSVFSVTIHKETTIDGEE LVKIGKLN LV DLAGSENIGRSGAVDKRAREAGNI
NQSLTLGRVITALVERTPHVPYRESKLTRILQDSLGGRTRTSIIATISPASLNLEETLSTLEYAHRKNIL
LEQTEGKLISEEDLIEHHHHH

FIG. 5

atggcggtgcccagccaaattcgtctgcgaagaagaaaggagagaaggggaagaacatccaggtggtggtgaga
tgcagaccatttaatttggcagagcggaaagctagcgcgccattcaatagtagaatgtgatcctgtacgaaaa
Gaagttagtgtagaactggaggattggctgacaagagctcaaggaaaacatacacttttgatatggtggtt
Ggagcatctactaaacagattgatgtttaccgaggtgttgtttgtccaattctggatgaagttattatgggc
Tataattgcactatctttgcgtatggccaaactggcactggaaaaacttttacaatggaaggtgaaaggtca
Cctaataagaggtatacctgggaagaggatcccttggctggtataattccacgtacccttcatcaaattttt
Gagaaacttactgataatggtactgaattttcagtcaaaagtgtctctgttggagatctataatgaagagctt
Tttgatcttcttaatccatcatctgatgtttctgagagactacagatgtttgatgatccccgtaacaagaga
Ggagtgataattaaagggttagaagaaattacagtacacaacaaggatgaagtgtatcaaatttttagaaaag
Ggggcagcaaaaaggacaactgcagctactctgatgaatgcatactctagtctgtccactcagttttctct
Gttacaatacatatgaaagaaactacgattgatggagaagagcttgttaaaatcggaaggtgaacttgggt
Gatcttgcaggaagtgaaaacattggccgttctggagctgttgataagagagctcgggaagctggaaatata
aatcaatccctgttgactttgggaagggtcattactgcccttgtagaaagaacacctcatgttccttatoga
gaatctaaactaactagaatcctccaggattctcttggagggcgtacaagaacatctataattgcaacaatt
tctcctgcatctctcaatcttgaggaaactctgagtacattggaatatgctcatagagcaaagaacatattg
aataagcctgaagtgaatcagaaactcaccaaaaaagctcttattaaggagtatacggaggagatagaacgt
ttaaaacgagatcttgctgcagcccgtgagaaaaatggagtgatatattctgaagaaaatttttagagtcag
agtggaaaaattaactgttcaagaagagcagattgtagaattgattgaaaaaattgggtgctgttgaggaggag
ctgaatagggttacagagttgtttatggataataaaaaatgaacttgaccagtgtaaatctgacctgcaaaat
aaaacacaagaacttgaaaccactcaaaaacatttgcaagaaactaaattacaacttggttaagaagaatat
atcacatcagctttggaaagtactgaggagaaaactcgaggggtaccgagcagaagctgatcagcaggaggagac
ctgatcgagcaccaccaccaccactga

FIG. 6

MACQPNSSAKKKEEGKNIQVVVRCRPFNLAERKASAHSIVECDPVRKEVSVRTGGGLADKSSRKTYTFDMVF
GASTKQIDVYRSVVCPIIDEVIMGYNCTIFAYGQTGTGKTFTMEGERSPNEEYTWEEDPLAGIIPRTLHQIF
EKLTONGTEFSVKVSLLEIYNEELFDLLNPSSDVSERLQMFDPRNKRGVIIKGLEEITVHNKDEVYGILEK
GAAKRTTAATLMNAYSSRSHSVFSVTIHMKETTIDGEELVKIGKLNLDLAGSENIGRSGAVDKRAREAGNI
NQSLTLGRVITALVERTPHVPYRESKLTRILQDSLGGRTRTSIIATISPASLNLEETLSTLEYAHRANKIL
NKPEVNQKLTKKALIKETEEIERLKRDLAAAREKNGVYISEENFRVMSGKLTVQEEQIVELIEKIGAVEEE
LNRVTELFMDNKNELDQCKSDLQNKTOLETTQKHLGETKLGLVKEEYITSALESTEEKLEQTEGKLISEED
LIEHHHHHH

FIG. 7

atggcggtgccagccaaattcgtctgcgaagaagaaaggagagaaggggaagaacatccaggtggtggtgaga
tgcagaccatttaatttggcagagcggaaagctagcgcccatcattcaatagtagaatgtgatcctgtacgaaaa
gaagttagtgtacgaactggaggattggctgacaagagctcaaggaaaaacatacacttttgatatggtgttt
ggagcatctactaaacagattgatgtttaccgaggtgtgtgtttgtccaattctggatgaagttattatgggc
tataattgcactatctttgcgtatggccaaactggcactggaaaaacttttacaatggaaggtgaaaggtca
cctaataagagtataacctgggaagaggatcccttggctggtataattccacgtacccttcatcaaattttt
gagaaacttactgataatggtactgaattttcagtc aaagtgctctgttggagatctataatgaagagctt
tttgatcttcttaatccatcatctgatgtttctgagagactacagatgtttgatgatccccgtaacaagaga
ggagtgataattaaagggttagaagaaattacagtacacaacaaggatgaagtgtatcaaattttagaaaag
ggggcagcaaaaaggacaactgcagctactctgatgaatgcatactctagtctgttcccactcagttttctct
gttacaatacatatgaaagaaactacgattgatggagaagagcttggttaaaatcggaaagttgaacttggtt
gatcttgcaggaagtgaaaacattggccgttctggagctggttgataagagagctcggaagctggaaatata
aatcaatccctgttgactttgggaagggtcattactgcccttgtagaaagaacacctcatgttcccttatcga
gaatctaaactaactagaatcctccaggattctcttggagggcgtagaagaacatctataattgcaacaatt
tctcctgcatctctcaatcttgaggaaactctgagtacattggaatatgctcatagagcaaagaacatattg
aataagcctgaagtgaatcagaaactcaccaaaaaagctcttattaaggagtatacggaggagatagaacgt
ttaaaccgagatcttgctgcagcccgtgagaaaaatggagtgatatttctgaagaaaatttttagagtcag
agtggaaaattaaactgttcaagaagagcagattgtagaattgattgaaaaaattggtgctggtgaggaggag
ctgaatagggttacagagttgtttatggataataaaaaatgaacttgaccagtgtaaatctgacctgcaaaat
aaaacacaagaacttgaaaccactcaaaaacatttgcaagaaactaaattacaacttggttaaagaagaatat
atcacatcagctttggaaagtactgaggagaaacttcatgatgctgccagcaagctgcttaacacagttgaa
gaaactacaaaagatgtatctggtctccattccaaaactggatcgtaagaaggcagttgaccaacacaatgca
gaagctcaggatatttttggcaaaaacctgaatagtctgtttaataatatggaagaattaattaaggatggc
agcctcgagggtaccgagcagaagctgatcagcgaggaggacctgatcgagcaccaccaccaccactga

FIG. 8

MACQPNSSAKKKEEGKNIQVVVRCRPFNLAERKASAHSIVECDPVRKEVSVRTGGLADKSSRKTYTTFDMVF
GASTKQIDVYRSVVCPIILDEVIMGYNCTIFAYGQTGTGKTFTMEGERSPNEEYTWEEEDPLAGIIPRTLHQIF
EKLTDNNGTEFSVKVSLLEIYNEELFDLLNPSSDVSERLQMFDPRNKRGVIIKGLEEITVHNKDEVYGILEK
GAAKRTTAATLMNAYSSRSHSVFSVTIHMKETTIDGEELVKIGKLNLDLAGSENIGRSGAVDKRAREAGNI
NQSLTLGRVITALVERTPHVPYRESKLTRILQDSLGGRTRTSIIATISPASLNLEETLSTLEYAHRANKIL
NKPEVNQKLTKKALIKYEETEEIERLKRDAAAAREKNGVYISEENFRVMSGKLTVQEEQIVELIEKIGAVEEE
LNRVTELFMDNKNELDQCKSDLQNKQTQELETTQKHLGETKLGLVKEEYITSALESTEEKLHDAASKLLNTVE
ETTKDVSLHSLDRKKAVDQHNAAEQDIFGKNLNSLFNNMEELIKDGSLEQTEGKLI SEEDLIEHHHHHH

FIG. 9

atggcgtgcccagccaaattcgtctgcgaagaagaaagaggagaaggggaagaacatccaggtggtggtgaga
tgcagaccatttaatttggcagagcggaagctagcgccattcaatagtagaatgtgatcctgtacgaaaa
gaagtttagtgtagaactggaggattggctgacaagagctcaaggaaaacatacacttttgatatggtgttt
ggagcatctactaaacagattgatgtttaccgaggtgtgtttgtccaattctggatgaagttattatgggc
tataattgcactatctttgcgtatggccaaactggcactggaaaaacttttacaatggaaggtgaaaggtca
cctaataagaggtataacctgggaagaggatcccttggctggtataattccacgtacccttcacaaaat
gagaaacttactgataatggtactgaattttcagtcaaaagtgtctctgttggagatctataatgaagagctt
tttgatcttcttaatccatcatctgatgtttctgagagactacagatgtttgatgatccccgtaacaagaga
ggagtgataaattaaaggtttagaagaaattacagtacacaacaaggatgaagtgtatcaaattttagaaaag
ggggcagcaaaaaggacaactgcagctactctgatgaatgcatactctagtcgttcccactcagttttctct
gttacaatacatatgaaagaaactacgattgatggagaagagcttggttaaaatcggaagttgaacttggtt
gatcttgcaggaagtgaaaacattggccgttctggagctgttgataagagagctcggaagctggaaatata
aatcaatccctgttgactttgggaaggggtcattactgcccttgtagaaagaacacctcatgttccttatcga
gaatctaaactaactagaatcctccaggattctcttggagggcgtagaagaacatctataattgcaacaatt
tctcctgcattctcaatcttgaggaaactctgagtacattggaatatgctcatagagcaaagaacatattg
aataagcctgaagtgaatcagaaatag

FIG. 10

MACQPNSSAKKKEEGKNIQVVVRCRPFNLAERKASAHSIVECDPVRKEVSVRTGGLADKSSRKTYTFDMVF
GASTKQIDVYRSVVCPIILDEVIMGYNCTIFAYGQTGTGKTFTMEGERSPNEEYTWEEDPLAGIIPRTLHQIF
EKLTNGTEFSVKVSLLEIYNEELFDLLNPSSDVSERLQMFDDPRNKRGVIIKGLEEITVHNKDEVYGILEK
GAAKRRTAATLMNAYSSRSHSVFSVTIHMKETTIDGEELVKIGKLNLDLAGSENIGRSGAVDKRAREAGNI
NQSLTLGRVITALVERTPHVPYRESKLTRILQDSLGGRTTSIIATISPASLNLEETLSTLEYAHRKNIL
NKPEVNQK

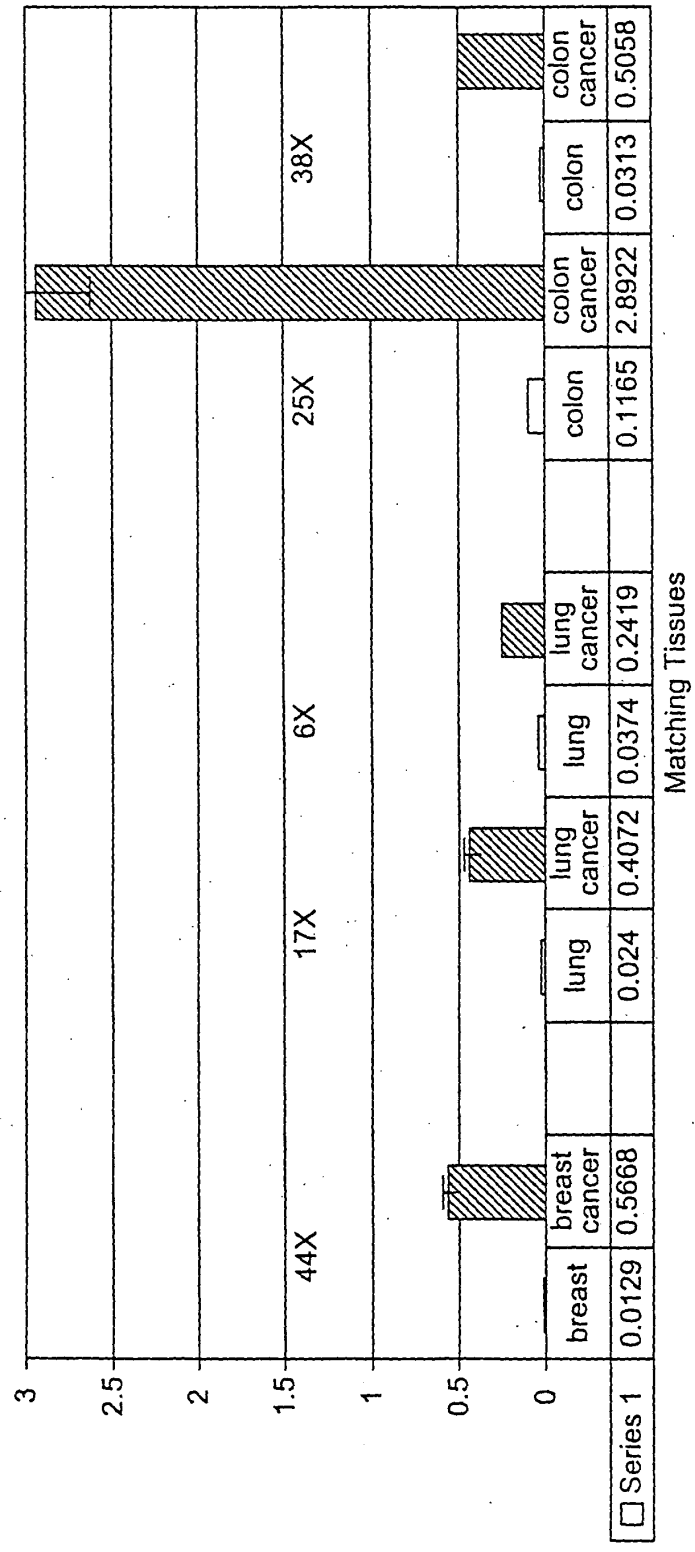


FIG. 11